REMARKS

Reconsideration is respectfully requested.

Claim 1 through 4 and 6 through 20 remain in this application. Claim 5 has been cancelled. No claims have been withdrawn. Claim 21 has been added.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraphs 2 and 3 of the Office Action

Claims 1 through 20 have been rejected under 35 U.S.C. §112 (second paragraph) as being indefinite.

With respect to the objection to claims 1 and 11, amendments have been made to the claim to indicate the acts by the grid manager. It is submitted that the above amendments to the claims are believed to clarify the requirements of the rejected claims, especially the particular points identified in the Office Action.

With respect to the objection to claim 14, it is submitted that the manner in which the data set is divided, and based upon what the data set is divided, is not a requirement of the claim, and that one of ordinary skill in the art would recognize many different ways of dividing a data set based upon different criteria, etc. It is therefore submitted that it is not necessary to set forth a particular manner in which the data set is divided for the claim to be definite.

Withdrawal of the §112 rejection of claims 1 through 20 is therefore respectfully requested.

Paragraphs 4 through 31 of the Office Action

Claims 1 through 6 and 8 have been rejected under 35 U.S.C. §102(b) as being anticipated by Choquier.

Claims 7, 9 and 10 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Choquier in view of Hubbard.

Claims 11 through 20 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Choquier in view of "Economic-Based Distributed Resource Management and Scheduling for Grid Computing" (hereinafter referred to as "the Buyya document").

Claim 1, as amended, requires "assigning a grid job to a grid computer based upon the at least one job performance factor in the file" and "wherein the at least one job performance factor in the file includes a level of security of job performance on the grid computer relative to other grid computers of the computing grid".

It is submitted that the Choquier patent does not disclose, and would not lead one of ordinary skill in the art to, the combination of requirements set forth in claim 1, particularly as claim 1 has been amended.

Further, claim 6 requires "the at least one job performance factor includes an amount of processor time utilization to reserve for processing local jobs on the grid computer". In the rejection of claim 6, it is alleged that this requirements is disclosed in the Choquier patent at col. 10, line 66 through col. 11, line 1, which states:

> Each local map 140 contains a CPU LOAD value and a CPU INDEX value for the respective server 120. The CPU LOAD indicates the current load of the server 120.

However, it is submitted that the Choquier patent does not disclose the requirements of claim 6. More specifically, claim 6 requires that the at least one job performance factor includes "an amount of processor time

utilization *to reserve* for processing *local jobs* on the grid computer" (emphasis added). In contrast, the Choquier patent discusses "a current load" without regard to the origination of the "load", and clearly does not suggest to one of ordinary skill in the art that there is any reservation of capacity for "local jobs". It is submitted that one of ordinary skill in the art would understand that the Choquier patent is discussing an overall load on the CPU, without distinction based upon the origin of the load, and one of ordinary skill in the art would not recognize any reservation of processor time utilization, particularly based upon the origin of the task. It is therefore submitted that the Choquier patent does not disclose, and would not lead one of ordinary skill in the art to, the invention claimed in claim 6.

Also, claim 7 requires that "the at least one job performance factor includes an operating time window for performing grid jobs on the grid computer". It is conceded in the rejection that "Choquier does not specifically disclose at least one job performance factor includes an operating time window for performing grid jobs on the grid computer" and it is then alleged in the rejection that:

> However, Hubbard teaches at least one job performance factor includes an operating time window for performing grid jobs on the grid computer (col 10, lines 30-33).

It is then contended that:

> It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Hubbard into the method of Choquier to have an operating time window as job performance factor. The modification would have been obvious because one of the ordinary skills of the art would have a specific window to be able to get the best result according to users need to perform the job.

However, it is submitted that the prior art, and particularly the Hubbard patent, does not disclose or suggest that "the times when the agent may utilize system resources" provides the benefit of getting "the best result according to users need to perform the job". More specifically, it is not

clear how the time control of Hubbard would lead to "get[ting] the best result" for the "users need to perform the job". It is therefore submitted that one of ordinary skill in the art would not make the combination of features suggested in the rejection upon this basis.

Claim 9 requires that "creating the file additionally comprises including at least one local operating condition for the grid computer in the file, and wherein the at least one local operating condition recorded in the file comprises an indication of *at least one time period of optimal electricity rate* for operating the grid computer". The rejection of claim 9 points to the Hubbard patent in allegedly obvious combination with Choquier, and contends that this requirement is disclosed in Hubbard at col. 16, lines 25 through 35, table 1 of Hubbard, and col. 10, lines 31 through 32. However, none of these portions of the Hubbard make any mention of any electricity rate, especially in consideration of a time period for performing a grid job. While Table 1 of Hubbard mentions may factors, the electricity rate is not one of them. Other portions (such as at col. 16, lines 25 through 35) mention the goals of the Hubbard system in broad terms, but these broad terms do not disclose the claimed subject matter.

Claim 11 requires "sending, by the grid manager, the job performance file with the grid job to one of the grid computers". It is conceded in the rejection of the Office Action that "Choquier does not specifically disclose sending the job performance file with the grid job to one of the grid computers", and then asserts that:

> However Buyya teaches sending the job performance file with the grid job to one of the grid computers (page 48, lines 28-29; lines 30-31; lines 35-37)
>
> It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Buyya into the method of Choquier to send the performance file with the job to the grid computer. The modification would have been obvious because one of the ordinary skills of the art would have send the job file with the job to be able to monitor the parameters on the executing system platform and make better load balancing decision.

Looking to the Buyya document at the referenced portion, it states:

> Nimrod-G is a tool for automated modeling and execution of parameter sweep applications (parameter studies) over global computational Grids [100][98][103j. It provides a simple declarative parametric modeling language for expressing parametric experiments. A domain expert can easily create a plan for a parametric experiment and use the Nimrod system to submit jobs for execution. It uses novel resource management and scheduling algorithms based on economic principles. Specifically, it supports user-defined deadline and budget constraints for schedule optimisations and manages supply and demand of resources in the Grid using a set of resource trading services [99].
>
> Nimrod-G provides a persistent and programmable *task-farming engine* (TFF,) that enables "plugging" of user-defined schedulers and customised applications or problem solving environments (e.g., ActiveSheets) in place of default components. The task-farming engine is a coordination point for processes performing resource trading, scheduling, data and executable staging, remote execution, and result collation. In the past, the major focus of our project was on creating *tools* that help domain experts to compose their legacy serial applications for parameter studies and run them on computational clusters and manually managed Grids [21][18]. Our current focus is on the use of economic principles in resource management and scheduling on the Grid in order to provide some measurable quality of service to the end user. Real-world economic methods provide incentives for owners to contribute their resources lo markets, and it also provides consumers with a basis for trading the quality of service they receive against cost.

However, it is submitted that this portions of the Buyya document speaks in broad terms of operation, and more importantly does not disclose to one of ordinary skill in the art the requirements of "sending, by the grid manager, the job performance file with the grid job to one of the grid computers".

It is therefore submitted that the cited patents, and especially the allegedly obvious combinations of Choquier and Hubbard and Choquier and the "Economic-Based Distributed Resource Management and Scheduling for Grid Computing" document set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claims 7 and 9 through 11. Further, claims 12, 15, 17 and 18, which depend from claim 11, claims 13, 14 and 20, which depend from claim 12,

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claim 16, which depends from claim 15 and claim 19, which depends from claim 13 also include the requirements discussed above and therefore are also submitted to be in condition for allowance.

Withdrawal of the §102(b) and §103(a) rejections of claims 1 through 20 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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